APPENDIX 3.A-

Workshop Goals and Logistics

Anthony Hamins, Building and Fire Research Laboratory, NIST

Workshop on Thermal Imaging Research and Performance Standards Needs for First Responders

Building and Fire Research Laboratory (BFRL)
National Institute of Standards and Technology (NIST)

December 9 and 10, 2004

NIST
National Institute of Standards and Technology
Technology Administration, U.S. Department of Commerce

Workshop Objectives

- identify thermal imaging needs of first responders, with an emphasis on standards.
- create a research agenda and a roadmap for continued development of thermal imaging technology.
- present and obtain feedback on draft performance metrics developed at NIST.

Standards

Why standards?

- improve product effectiveness
- may lead to increased demand
- ad-hoc testing being conducted by agencies
  - expensive to develop
  - may miss key elements
- improve safety for first responders and the public

Standards Organizations

- advocating scientifically-based consensus codes and standards
- American Society for Testing and Materials (ASTM)
- National Fire Protection Association (NFPA)

National Fire Protection Association
The authority on fire, electrical, and building safety

ASTM Standards

- Test methods: E 1933-99a, E 1543-00, E-1862-97, E-1897-97
- ASTM standards do not address typical use conditions - such as a fire

NFPA Standards

- Committee on Electronic Safety Equipment (ESE)
  - standards for fire fighter equipment
  - Self-Contained Breathing Apparatus (SCBA), 1981
  - Personal Alert Safety System (PASS device), 1982
  - IR Imagers - life-critical instrumentation lacking standards

Agenda: Workshop on Thermal Imaging Research Needs

Day One – December 9th, 2004

8:45 Opening Remarks – Workshop Goals and Logistics *(Dr. Anthony Hamins, NIST)*

8:55 Self Introductions

9:00 Visionary Presentations - End User's Response to these Questions:
How do you currently use thermal imagers?
How important are technical qualities?
How important are physical qualities?
What is the value of features (bells & whistles)?
What info do you currently use to make purchasing decisions?

9:00 The Ideal Thermal Imager for the Fire Service *(Bruce Varner, Fire Chief, Santa Rosa Fire Department, CA)*

9:20 The Ideal Thermal Imager for Fire Fighting *(Brian Duggan, Fire Chief, Northampton Fire Department, MA)*

9:40 The Wide-Angle View from a First Responder Trainer *(Bob Athanas, President, SAFE-IR, Inc.)*

10:00 Break

10:10 The Industrial Point of View
10:10 Perspectives from TI Camera Manufacturers *(Larry Konsin, P. E., American Council for Thermal Imaging)*

10:30 Perspectives from a Detector Manufacturer *(Tim McCaffrey, Raytheon)*

10:50 Standards Development and Government Agency Involvement
The performance standards creation process and Government agency contributions to thermal imaging technology
10:50 DOJ/NIJ *(Chris Tillery, Research and Technology Development, NIJ)*

11:10 DHS/OLES *(Phil Mattson, Office of Law Enforcement Standards (OLES), NIST)*

11:30 NRL *(John Farley, Navy Safety & Survivability, Naval Research Laboratory)*

11:50 Standards Development Procedures *(Terry Clausing,Chair, ASTM E-7 Committee on Non-Destructive Testing)*

12:10 Lunch

Agenda: Workshop on Thermal Imaging Research Needs

Day One – December 9th, 2004

1:20 Thermal Imaging Science and Research Activities
1:20 Overview of NIST Efforts to Support Fire Fighter Technologies *(Nelson Bryner, Leader, NIST)*

1:35 Overview of NIST Thermal Imager Project *(Dr. Francine Amon, Analysis and Prediction Group, NIST)*

1:50 Testing Spectral Responsivity of IR Cameras *(Dr. Joseph Rice, Optical Technology Division, NIST)*

2:05 Perspectives from the Night Vision Lab *(John O'Neill, Night Vision Laboratory)*

2:25 Break
2:40 **Purpose and Guidelines for the Working Sessions** *(Anthony Hamins)*
- What are the prioritized research needs for thermal imaging for first responders?
- What performance metrics are needed? How do they differ from current methods?
- What standards are needed?
- What technological advances are needed?

2:55 Working Sessions
- Session 1: (Bldg 224/Rm B245) Coordinator: Nelson Bryner
- Session 2: (Bldg 224/Rm A369) Coordinator: Anthony Hamins
- Session 3: (Bldg 224/Rm A312) Coordinator: Francine Amon

4:00 Tour of NIST Large Fire Laboratory, AML, and Thermal Imaging Facility *(Bldg 205, AML & Bldg Rm B347)*

5:00 Adjourn for the Day

Agenda: Workshop on Thermal Imaging Research Needs

Day Two – December 10th, 2004

8:00 Coffee and Refreshments (Building 224, Room B245)

8:30 Reconvene Working Groups (Rooms B245, A312, A369)
Review working session purpose, progress, questions and issues.

10:00 Break

10:10 Reconvene Workshop *(All Participants)*
Sessions provide summary of their discussions

10:40 Group Discussion *(Nelson Bryner, moderator)*
Deliberation on working session topics:
- What are the prioritized research needs for thermal imaging for first responders?
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- What standards are needed?
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12:15 Wrap-Up *(Nelson Bryner)*

12:30 Adjournment

Purpose and Guidelines for Working Sessions

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2:55 Working Sessions
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4:00 Tour of Labs